

A detailed cutaway illustration of a valve handle and stem assembly. The handle is a long, curved metal arm with a spherical end. It is connected to a stem that passes through a valve body. The valve body is a circular flange with two bolt holes and a central opening. The internal components, including the stem and a valve seat, are visible in the cutaway. The metal has a brushed, industrial appearance. The background is a light gray with a teal curved shape on the left side.

Special-Valves For Highest Demands

- free of cavities
- free of maintenance / self lubricating
- chemical resistant
- long durability
- PED 97/23EG
- TA - Luft approval
- AD -2000 / HP0 / TRD 201
- Firesafe acc. to API 607 / ISO 10497
- KTA 1401
- Type approvals
- DVGW approval





AZ-Armaturen - 45 Years of Experience



AZ-Armaturen is an internationally active company with production plants in Germany, Brazil, South Africa, Singapore and Shanghai as well as numerous own sales offices and service centers for example AZ-Netherlands, AZ-Rhineland and AZ-Italy. We have about 250 employees worldwide and an export ratio of more than 60%.

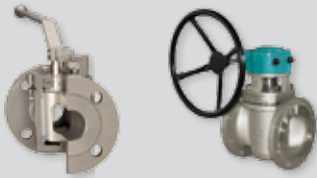


Typical application for AZ-Valves:

- Plug-Valves for polymerizing and crystallizing media
- Jacketed valves for sulphur / molten sulphur / sulphuric acid / sulphur recovery
- Plug-Valves for chlorine services
- Jacketed valves for bitumen services
- Plug-Valves for ammonia and urea services
- Plug-Valves for heavy oil diesel applications (refineries | ship building)
- Plug-Valves for melamine services
- Plug-Valves for steam services
- Samplingsystem for the chemical industry
- Samplingsystem type Vario and GSP especially for refineries
- Lined Plugvalves for acid applications
- Full bore Plugvalves for abrasive media
- Crossover-valve-combinations for filters | pumps | safety valves
- Control Plug-Valves for control applications
- Plug-Valves for pulp and paper industry
- High-pressure Plug-Valves for seawater desalination
- Plug-Valves for aluminium industry
- Special material plug-Valves for acetic and acid plants

1

Plug-Valves metallic with PTFE sleeve 2 - 7 ways



ISO - STANDARD

Plug-Valve with ISO bracketflange

DN 15 - 600 / PN 10 - 40
NPS 1/2" - 24" / class 150 - 600

1.1



F-3 ISO - STANDARD

Plug-Valve with PTFE sleeve

DN 15 - 600 / PN 10 - 40
NPS 1/2" - 24" / class 150 - 600

1.2

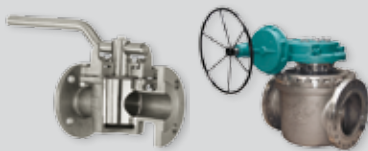


F-4 / F-5 ISO - STANDARD

Four- and five-way plug-valve

DN 15 - 600 / PN 10 - 40
NPS 1/2" - 24" / class 150 - 300

1.3

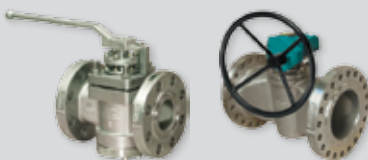


Extra

Plug-Valve full bore design

DN 15 - 600 / PN 10 - 40
NPS 1/2" - 24" / class 150 - 600

1.4



HDS

Plug-Valve high pressure design

DN 15 - 600 / PN 100 - 160
NPS 1/2" - 24" / class 600 - 900

1.5

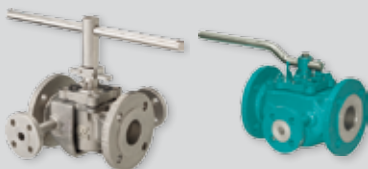


TM

Plug-Valve with heating jacket (cast design)

DN 15 - 600 / PN 10 - 100
NPS 1/2" - 24" / class 150 - 600

1.6

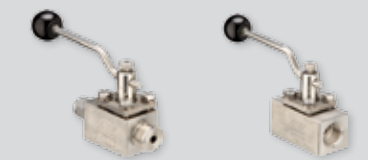


HM

Plug-Valve with full heating jacket (cast design)

DN 15 - 600 / PN 10 - 100
NPS 1/2" - 24" / class 100 - 600

1.7

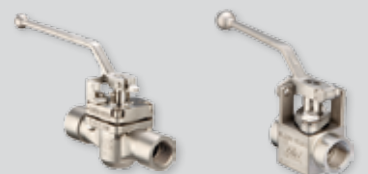


MGZ / MBZ / MB / WA

Screwed plug-valve

Size 1/2" bis 2"
Withworth pipe thread acc. to DIN ISO 228/1
American Standard pipe thread NPT
Others on request

1.8

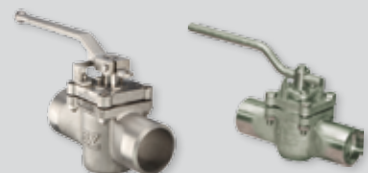


MG

Screwed plug-valve (cast design)

Size 1/4" bis 2"
NPT pipe thread acc. to ANSI B1.20.1
Withworth pipe thread acc. to DIN ISO 228/1 and DIN2999
GYROLOK / SWAGELOK Lock ring or Tube fitting

1.9



SW / BW

Plug-Valve with welded ends

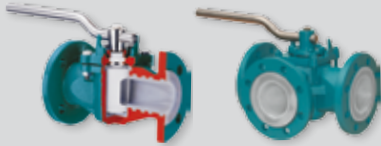
DN 10 - 600 / PN 10 - 100
NPS 3/8" - 24" / class 150 - 600

1.10

2

Plug-Valves with FEP / PFA-lining 2 - 3 ways

2.1

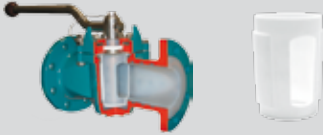


STANDARD A

Plug-Valve with FEP / PFA lining

DN 15 - 300 / PN 10 - 40
NPS ½" - 12" / class 150 - 300

2.2



AB 2000

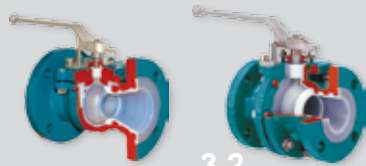
Plug-Valve with exchangeable PTFE sleeve

DN 15 - 300 / PN 10 - 40
NPS ½" - 12" / class 150 - 300

3

Ball-Valves with FEP / PFA-lining

3.1

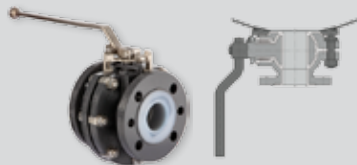


NONOBLOC / NVN

Ball Valve with FEP / PFA lining

DN 15 - 200 / PN 10 - 25
NPS ½" - 8" / class 150

3.3



NEO-VAL / KA

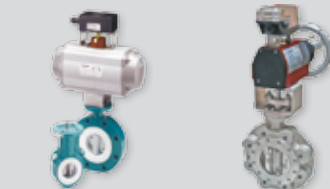
Ball- and vessel-outlet-valve

DN 15 - 200 / PN 10 - 25
NPS ½" - 8" / class 150

4

Butterfly-Valves with PTFE / PFA-lining

4.1



CV

Chemistry butterfly- and control-valve

DN 15 - 600 / PN 10 - 25
NPS 1" - 24" / class 150
Lug and Wafer design
Body materials; Aluminium / epoxy, GGG40.3 / epoxy, Stainless steel, C-steel

5

Check-Valves with FEP / PFA-lining

5.1



GLOBUS / DELTA

lined ball-check-valves

DN 15 - 250 / PN 10 - 40
NPS 1" - 4" / class 150 - 300
Available with sight glass for visual function control
Temperature $T_{max} = 150^{\circ}C$

6

Sight glasses, Strainers with FEP / PFA-lining

6.1



OCULAR / BASKET

lined and metallic

DN 15 - 250 / PN 10 - 40
NPS 1" - 4" / class 150 - 300
Also available with heating jacket
Temperature $T_{max} = 200^{\circ}C$

7

Sampling System for liquids, liquid gas and gas

7.1



CONTIFLOW

Sampling system for liquids, solids
 DN 15 - 100 / PN 10 - 40
 NPS ½" - 4" / class 150 - 300
 No flow interruption
 Piggable

- representative sample
- pressureless sample
- defined sample quantity
- closed system

7.2



VARIO

Sampling system for liquids
 DN 15 - 100 / PN 10 - 40
 NPS ½" - 4" / class 150 - 300
 Free definable sampling quantity

- representative sample
- pressureless sample
- defined sample quantity
- closed system

7.3



SAMPLING

Sampling system for liquids
 DN 15 - 100 / PN 10 - 40
 NPS ½" - 4" / class 150 - 300
 Spilling eliminated no contamination

- representative sample
- pressureless sample
- defined sample quantity
- closed system

7.4



GSP

Sampling system for liquid - gas - liquid gas
 DN 15 - 100 / PN 10 - 40
 NPS ½" - 4" / class 150 - 300
 integrated system purge available
 no contamination

- representative sample
- defined sample quantity
- closed system

7.5



SAMPLING SIC

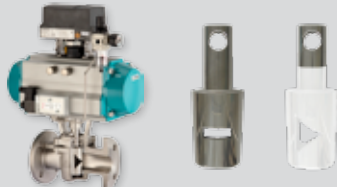
For Two-Phase liquids
 DN 15 - 100 / PN 10 - 40
 NPS ½" - 4" / class 150 - 300
 Repräsentative long term sample

- representative sample
- pressureless sample
- defined sample quantity
- closed system

8

Control-Valves metallic or with FEP / PFA - lining

8.1



RH / RHS

Control-valves
 DN 15 - 450 / PN 10 - 40 - 63 - 100
 NPS ½" - 18" / class 150 - 300 - 600
 Linear and equal percentage characteristics
 Standardized K_{vs} - values SRI - IV

9

Automation pneumatic, electrical and hydraulical

9.1



Actuators

Double and single acting
 Multiposition actuators
 With spring centered middle position
 Turning degree > 90°

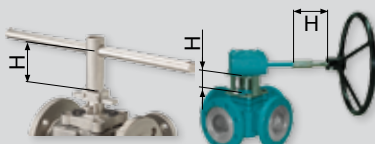
9.2



SSK

Ratchetcoupling for multiport-valves
 Possible Positions 90°, 180°, 270° und 360°
 Possible Positions 120°, 240° und 360°


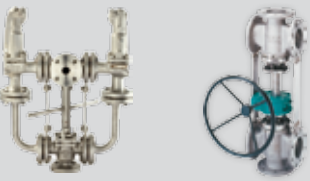

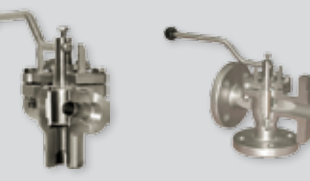
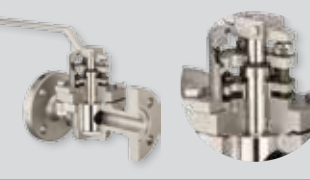
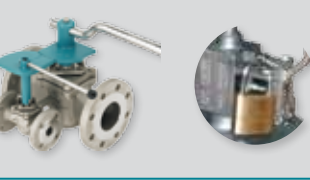
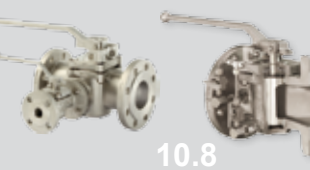
9.3



KSV

Plug-stem-extension
 Available for all AZ - valves
 Length (H) on desire
 For remote control
 For thick walled insulating tubes

10 Special-Valves and Special Designs

 <p>10.1</p>	<p>FM-100 Manometer plug-valve 90°-savty-valve For pressure gauges and instrument leads Safe-guarded ventilation for the pressure relief of the manometer Pressure range up to PN 160</p>
 <p>10.2</p>	<p>UK Cross-over-combination All types of AZ-valves combinable For heating and cooling cycles For reactor cycles Cross- over valves for filter cycles</p>
 <p>10.3</p>	<p>SAVA Special cross-over valve for safety (relief) valves full-flow, round bore 100% tight shut- off (DIN EN 12266-1) Operation errors impossible because of position indication Safe backflow of blow off capacity</p>
 <p>10.4</p>	<p>BMH Special-valve for safe flushing of pipe systems Defined plug positions Easy depressurizing of the flushing hose Space- saving design Safe operation</p>
 <p>10.5</p>	<p>SAFETY SEALING for AZ plug-valves Hightemperature- chemicalsealings Additional safety "to atmosphere" FIRE-SAFE certificate acc. to API 607 "TA-Luft 2002" approval</p>
 <p>10.6</p>	<p>LOCKING DEVICE for AZ plug-valves Pilot valve combination Linear key conception Indexing plunger arrestor Pad lock eyelets</p>
 <p>10.7</p>	<p>SP / DBBC Special valves with flushing device For plug bore cross-flushing For media which tend to stick, harden, cristallize or polimerize Double plug- valve combination with pressure expansion Special combinations with flushing device / inspection connection</p>

Materials:

Standard body materials:

- Ductile Iron EN-GJS-400-18 (GGG40.3)
- ASTM A395
- Carbon Steel 1.0619 (GS-C 25)
- ASTM A216 WCB
- Stainless Steel 1.4408
- ASTM A351 CF8M

Special body materials:

- Hastelloy B / C
- Inconel
- Monel
- Nickel
- Zirconium
- Titanium
- Tantalum

Standard plug materials:

- Stainless steel 1.4408
- ASTM A351 CF8M
- Stainless steel 1.4308
- ASTM A351 CF8

Special plug materials:

- Hastelloy B / C
- Inconel
- Monel
- Nickel
- Zirconium
- Titanium
- Tantalum

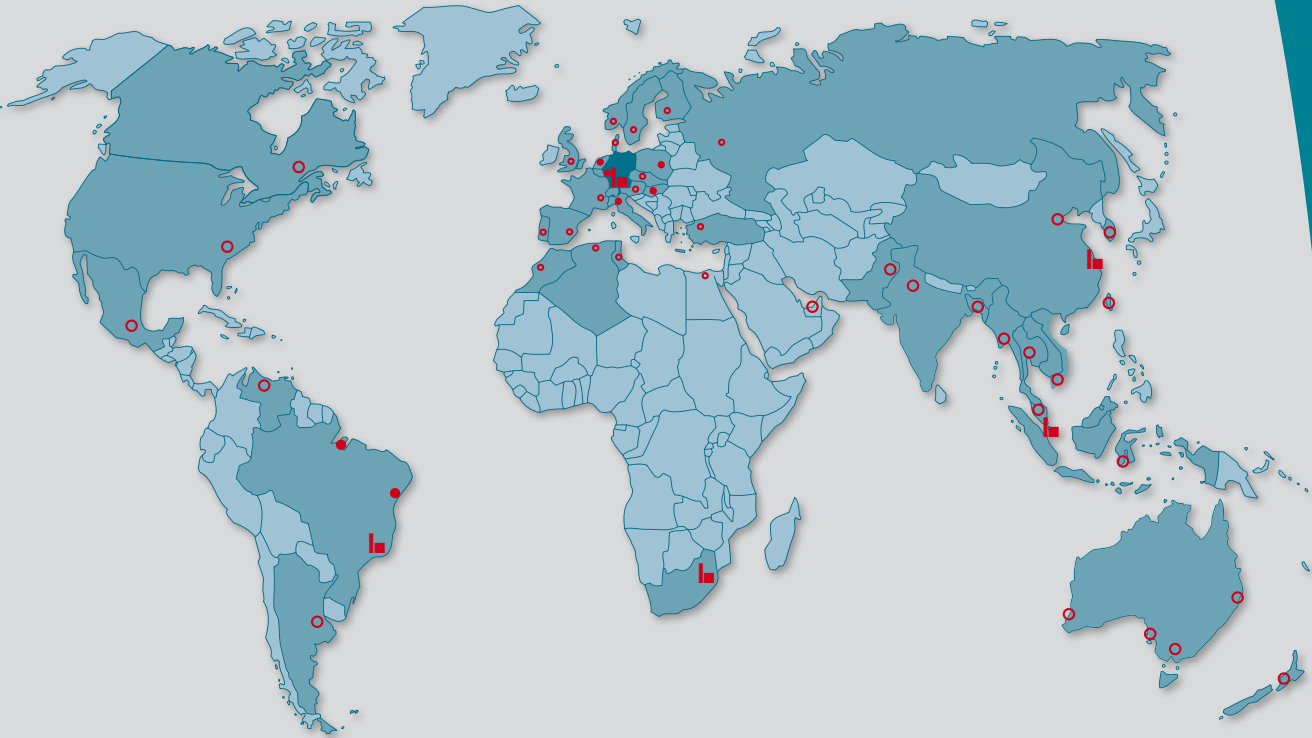
Standard lining materials:




- FEP
- PFA
- PFA conductive
- PVDF

Standard operation temperature for PTFE-sleeves: $T_{max} = 220^{\circ}\text{C}$
 Higher temperature and special design on request



AZ-Armaturen - all over the world



-  AZ-production plant
-  AZ-service - branch
-  AZ-agency



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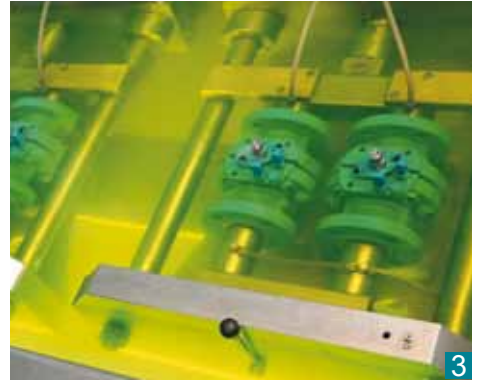
In-house testing and process technology



1



2



3



3



4



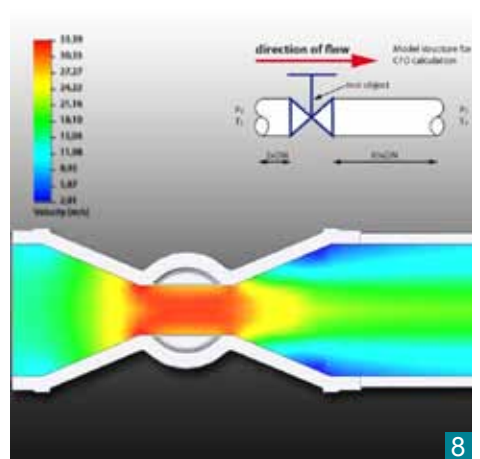
5



6



7



8

- 1 Dye penetrant test acc. to DIN EN 571
- 2 Material – spectral analysis
- 3 100% tightness testing with 6 bar air acc. to DIN EN12266 part 1 + 2
- 4 Helium leakage test by means of mass spectrometer acc. to DIN EN 1518
- 5 X-ray acc. to DIN EN 1435
- 6 TÜV approved welders using most up-to-date welding stations (MIG, MAG, TIG and SMAW/MMA)
- 7 High voltage test acc. to ISO 2746 (15.000 volt)
- 8 3D-CAD computer-aided design with CFD computational fluid dynamic

Special inspections by:

- Germanischer Lloyd
- Bureau Veritas
- TÜV / DEKRA
- DNV and others.
- Final certificates acc. to DIN EN 10204 – 3.1 are issued for each valve